

**Note:** Hand mixed concrete and grout are not permitted on projects subject to the "Standard Specifications for Public Works Construction" ("Green Book".)

Add water until you achieve pouring consistency without segregating the grout components. Rod or vibrate immediately. Re-rod or re-vibrate the grout about 10 minutes after pouring to ensure proper consolidation. When the grouting of a second lift is to be continued at later time, stop the grout placement 2 inches from the top of the masonry units.

**Note:** All cells must be filled solid with grout.

#### V. MORTAR KEY

To obtain proper bonding between the footing and the first course of block, form a mortar key by embedding a flat 2 x 4 flush with, and at the top of, the freshly placed footing concrete (See Drawing CVCS 33). Remove the 2 x 4 after the concrete has started to harden (about 1 hour). You may omit a mortar key if you set the first course of block into the freshly placed concrete footing.

#### VI. WALL DRAINS

Provide wall drains (4-inch-diameter) at 6-foot intervals along the length of the wall and located just above the level of the soil or paving on the front face of the wall (See Drawing CVCS 33). Alternatively, form the drains by placing a block on its side at 6-foot intervals, by leaving out the mortar in the vertical spaces between all the blocks in the first course above the soil, by paving (head joint) on the front face of the wall, or by some other equivalent method acceptable to the City. Backfill behind wall drains or open head joints must be 12 inches wide filled with gravel and must extend from the top of the footing to above the top of the drain or open joint.

#### VII. SOIL

Wall design, footing sizes and reinforcing steel are all based on an active earth pressure with an equivalent fluid pressure of 36 psf and a weight of 120 pounds per cubic foot (pcf). Extend all footings at least 12 inches into undisturbed natural soil or into fill that has been compacted to at least 90 percent density. Dampen soil prior to placing concrete in footings. Where the ground slopes away from the base of the wall, you must have a horizontal distance of at least 7 feet from the toe of the footing to "daylight" (See Drawing CVCS 33). The City may require a soils report, prepared by a licensed civil engineer specialized in soil mechanics or a licensed geotechnical engineer, depending on soil conditions at the site.

Footing sizes in the attached tables are based on a 1,000 psf maximum soil bearing value. If you wish to take advantage of a higher bearing value, you must have a licensed architect (a licensed architect may not design Public Works walls that are

Revised:	Original approval date:	CITY OF CHULA VISTA PUBLIC WORKS DEPARTMENT	
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	CITY ENGINEER Date: 12/10/01		
	<i>Brad Rump</i>		
	BUILDING OFFICIAL Date: 12/10/01		